

AGRICULTURAL MARKETING

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USDA GRADES NONFAT DRY MILK

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A Real Christmas for the Needy *By Howard P. Davis*

THIS HOLIDAY SEASON, as in years past, church groups, women's clubs, business organizations and service clubs all over the Nation will be making up Christmas food baskets for their less fortunate neighbors. It's all a part of the American way of sharing our abundant food supply with those who need it.

Such local groups may not know that they can make a holiday gift to needy families that will put more food on their tables not only at Christmastime but all year long, too. There is a U.S. Department of Agriculture food assistance program available to every county and city in the Nation. Many communities already have one of these programs operating.

The Food Stamp Program helps low-income people in over 330 cities and counties buy more and better food. It is gradually being expanded to 402 additional areas designated last September. The participating family exchanges about what they would be expected to spend on food for coupons worth more than they paid. The coupons are spent like money at local food stores. Studies show that low-income families using the coupons get more milk, meat, fruits and vegetables — foods they and their children need for better health and

vitality.

The USDA's Family Food Donation Program is supplying needy people in some 1,500 counties with a selection of about 10 to 15 staple foods to supplement the food they buy.

While these two food assistance programs are helping some 5 million needy people get more and better food, there are many more — perhaps some in your community — who are in need of Federal food assistance but are not getting it for one reason or another. Generally interested local groups can do something to help. The holiday season is a good time to begin.

● In areas where the Food Stamp Program or Family Food Donation Program is in operation, local organizations can help low-income families get started by providing transportation to the certification office where they are interviewed for food assistance.

● Volunteers can give particular help to elderly or handicapped people who need transportation to the food store, or to the distribution center where they pick up their donated foods.

● Some needy people simply don't know there is food donation or a food stamp program in their area or that it could help them eat better

and feel better. They need someone to explain it to them, particularly the elderly, the handicapped, and those who can't read well.

● In areas of the country that have had no food stamp or food donation program, organizations can work with their local welfare and public officials to help get one established.

The Food Stamp Program is requested through State welfare departments, with gradual expansion of the program over a period of years until it finally reaches every

The author is Deputy Administrator of C&MS, USDA, in charge of Consumer Food Programs.

area of the country that wants it.

USDA-donated foods for distribution to the needy are available immediately to any area, other than those in the Food Stamp Program. The Federal Government supplies the food; State and local governments certify as to need and provide local transportation, storage and distribution facilities.

For more information about either the Food Stamp or the Family Food Donation Program, write Consumer Food Programs Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250.

ORVILLE L. FREEMAN
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Cover Story

Nonfat dry milk, constantly improving in quality, has become an increasingly important consumer food product. See page 11.

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how to select your christmas tree

WHILE IT'S FUN, that once-a-year decision-making you do at the Christmas tree lot can also be a chore, especially if you want to find the *ideal* tree to grace your picture window.

Experts in the Consumer and Marketing Service—the U.S. Department of Agriculture agency that grades many of the farm products we eat and use—say anyone can make use of the official U.S. grade standards to judge whether a particular tree is the best selection.

Used mainly by large-scale buyers and sellers of Christmas trees, the standards describe various quality levels. The standards, and the grading service that C&MS offers, are helping to get better quality trees onto the market. For instance, growers use the standards as a guide in trimming their trees during the growing period, to improve their appearance and make them more marketable at cutting time.

The three grades are: *U.S. Premium* (rates best in quality), *U.S. No. 1* (next best), and *U.S. No. 2* (rates lowest). Occasionally, you may find individual trees on lots tagged to show the grade.

Points the graders consider—and you can check the same points when deciding whether a tree is the ideal one—are *shape, density, freshness, cleanliness, and absence of defects*. These pictures illustrate how to care for it.

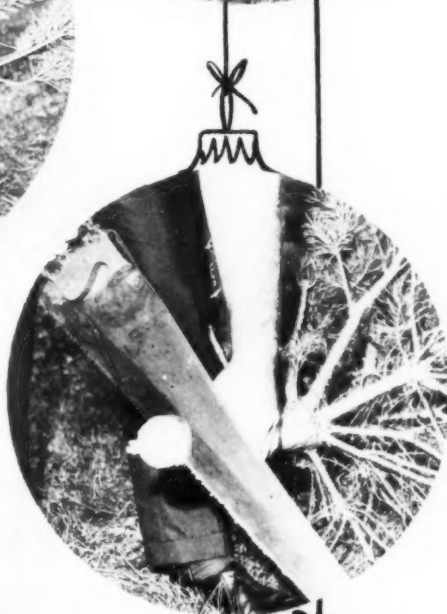
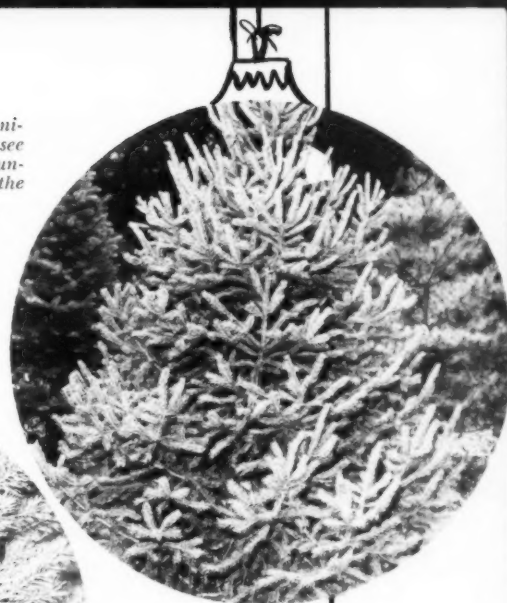
To find an ideal tree, look for a uniform triangular taper. Check to see that it is free of weak, broken, or unduly long branches and crooks in the stem and that it is well filled out.



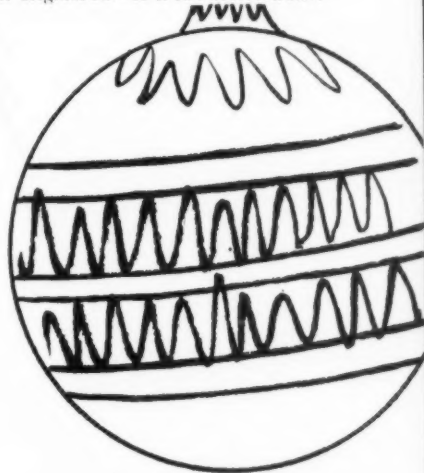
Shake, or bounce the tree on the ground lightly, to see that the needles are firmly attached. If only a few needles drop, the tree is fresh and more likely to retain its needles throughout the holiday season in your home.



To prevent your tree from drying out and becoming a fire hazard, stand it in water and store it in a cool, shady place, preferably outside. Leave it in water even after you decorate it, and locate it away from radiators, fireplace, TV set, or other heat source.



Once home, saw off the butt end of the tree—about an inch or so above the original cut—so it can absorb water.



Vice President Hubert H. Humphrey Speaks

Last summer, some 300 school lunch and commodity distribution directors who cooperate in administering U.S. Department of Agriculture food assistance programs in the 50 States, D.C., and Territories, met in Washington, D.C., for a conference with Consumer and Marketing Service's Consumer Food Programs workers. This gathering coincided with the 20th anniversary of the National School Act. The conference theme, "Closing the Nutrition Gap," was aptly summarized in the following excerpts from remarks to the conferees by Vice President Hubert H. Humphrey.

IN THE 20 YEARS you have had this School Lunch Program you have learned a great deal. You started out with little and it is growing rapidly and surely. It grew because you fought the good fight and you had your friends in the Congress and in the respective administrations. You saw the need and you projected that need by your letters and your words. As a result of that, the School Lunch Program today is a firm, certain reality.

The threat to peace is not in the Pentagon nor is the threat to peace

in the Capitol of any State or in Washington, D.C. The threat to peace may very well be in these conditions of injustice, of malnutrition, of poverty, of disease and of illiteracy that descend on two-thirds of mankind. I think so. There are evil forces that use those conditions for their purposes of aggression, or for their purposes of conquest, or their purposes of lawlessness, or disorder, or violence or whatever else it may be. So those of you working with the School Lunch Program are not just directors of a little local program in your State or locality. You are a part of a vanguard, a part of a great army of peace workers.

I am one of those in government who believes that if we can't do well at home, we'll never do well abroad. I'm one of those who believes that the way that you can demonstrate what you can do abroad is by doing it at home. If you can't conquer poverty here, what makes you think you can do it in Africa or in Asia? If you can't close the nutritional gap here where we have an abundance of food and

fiber such as the world has never known, what makes you think that we can do it any place else?

The school lunch is a fact for many of our children but it is not a fact for all of them. And it is a distant dream to most of the rest of the world. We're only on the threshold of a rudimentary program in most of the developing countries. But they are interested and they are working and they are using the techniques that we have evolved over the many patient years of trial and error as to how best we could get this job done. I want to make sure that we have the food supplies to help these people with those overseas school lunch programs. There is no use getting people all geared up for something and then saying, "I'm sorry we're out of biscuits." That doesn't help.

The Child Nutrition Act should be headlines all over America in every country newspaper and every city newspaper because it relates to our most precious resource — our young. The Child Nutrition Act will give you a chance to break new ground as well as to consolidate well won gains.

The new programs have as their cornerstones the kind of experience that you have acquired in 20 years under the School Lunch Program. The Child Nutrition Act didn't just come out of thin air. It came out of your experience. That's the way to get good legislation.

Now to the "nutrition gap." Some people are overfed and some are underfed. This is the only nation on the face of the earth in which you are really compelled to go on a diet. You pay people to put you on diets. But we are going to close that gap. We are going to do it because you showed us the way — not because some government planner said that's the way to do it. We have the means, the resources, the tools to get the job done. We are going to close it for our children and we are going to close it for our low-income families.

Examining exhibit at Consumer Food Conference are (from left) Howard P. Davis, Deputy Administrator, Consumer Food Programs, C&MS; William M. Seaborn, Assistant to the Secretary; S. R. Smith, Administrator, C&MS; and Vice President Humphrey.





FOOD ASSISTANCE ROUNDUP FISCAL YEAR '66

Food Donations

Regular recipients of USDA food include schools, charitable institutions, and needy families. During fiscal year 1966, schools received donations of 543.0 million pounds (plus another 244.3 million pounds that USDA purchased especially for schools participating in the National School Lunch Program); charitable institutions received 145.2 million pounds; and needy families, 854.9 million pounds. USDA acquires food through its price-support and surplus-removal activities. USDA's Consumer and Marketing Service allocates the food to the States for the benefit of their schools, charitable institutions and needy families.

USDA food can always be used to feed victims of floods, earthquakes, hurricanes, and other natural disasters. Chief examples in fiscal 1966 were the food distribution after Hurricane Betsy in early September 1965 and after the destructive typhoon that struck American Samoa last January 30. The immediate relief of Betsy's victims required about 6 million pounds of USDA food. American Samoa was still receiving USDA food for disaster relief as fiscal 1966 ended.

National School Lunch Program

During fiscal 1966, Congress earmarked \$2 million of the appropriation for the National School Lunch Program to be used for demonstration lunch projects or to improve existing projects in economically depressed areas. Some

200,000 pupils in over 800 schools benefited.

USDA's Consumer and Marketing Service's allocation of this money to the States, and its effective use locally, brought a Presidential commendation and a flood of grateful responses from teachers and educators across the Nation who were finding it difficult to teach hungry children.

Lunches served under the National School Lunch Program are bargains of tastiness and nutrition. Students can enjoy them at prices substantially below the cost of the lunches — thanks to Federal, State, and local contributions to the program. During fiscal 1966, the Federal contributions to an overall program cost of \$1.5 billion, made through USDA's Consumer and Marketing Service, amounted to \$139.1 million in cash and about \$180 million worth of food. Programs spent more than \$790 million locally to buy additional food. Some 10 percent of the 3.1 billion lunches served were served free to children that local school officials determined were unable to pay the full cost of the lunches.

Special Milk Program

The Special Milk Program, administered by USDA's Consumer and Marketing Service, provided milk at reduced cost to children in some 97,000 schools, child-care centers, summer camps, orphanages, and similar institutions, during fiscal year 1966. The 3.1 billion half pints of milk served under this

program, added to that served with lunches in the National School Lunch Program, amounted to 6.2 billion half pints — more than 5 percent of all fluid milk marketed in the U.S. last year. USDA encourages participation in its Special Milk Program by reimbursing participating schools and institutions for the partial cost of each half pint they serve.

Food Stamp Program

USDA's Food Stamp Program during fiscal year 1966 expanded geographically nearly threefold and practically doubled its participation. It also celebrated its fifth anniversary on May 29, and President Johnson took this occasion to commend the program and report its progress to the Nation.

As fiscal 1966 ended, the program was functioning in 324 areas in 40 States and the District of Columbia with some 1.2 million of the Nation's needy benefiting from more and better food that the Food Stamp Program makes possible.

USDA's Consumer and Marketing Service issued more than \$174 million worth of food-stamp coupons in fiscal 1966. Nearly \$65 million of this amount was for bonus coupons. This means that food-stamp participants invested nearly \$110 million of their own money to improve their own and their family's welfare. The \$65 million was new money in the food-stamp areas, which not only brought the benefits of more and better food to low-income households, but stimulated local economies as well.

AUTOMATION COMES TO THE WAREHOUSE

By Dabney W. Townsend

THE U.S. Department of Agriculture's Consumer and Marketing Service has completed an experiment with automation in auditing cotton warehouse receipts, using a sample of warehouses in Memphis, Tenn., to test the accuracy, efficiency, and cost of the machine against the old method.

One responsibility of C&MS, through its Transportation and Warehouse Division, is the enforcement and administration of the U.S. Warehouse Act.

This Act authorizes the licensing and bonding of public warehouses for the storage of agricultural products. It authorizes warehousemen to issue special receipts for products stored and provides for periodic inspection of these warehouses to safeguard the integrity of the issued receipts.

C&MS maintains a rigid control over the receipts distributed to licensed warehousemen. Each receipt then issued by a cotton warehouseman to a depositor represents one bale of cotton. During inspection of a licensed cotton warehouse, the licensee must show what has happened to each warehouse receipt on his control account.

Unissued receipts on hand are checked, and canceled receipts, held as evidence that the bales have been shipped, are audited. Those unaccounted for are "live" or outstanding and must be supported by an actual bale of cotton in the warehouse.

The audit is devised to establish accurately, and as rapidly as possible, the number of live receipts for which bales must be in the warehouse. An inventory of these bales verifies that the required bales are on hand.

A file of master sheets, set up to cover all receipts issued, is maintained for each warehouse. During the old auditing process, the numbers of canceled receipts were crossed off these sheets by hand.

With the new automated process,

however, the information from the master sheets is put on magnetic tape. The warehouseman submits his canceled receipts to a central location for auditing where they are run through a machine to void each canceled number.

The machine then prints a check sheet showing 1,000 receipt serial numbers in proper sequence and indicating those voided. The machine can process about 30,000 receipts in an hour.

About 10 million cotton warehouse receipts are audited each year. Formerly, at least 6½ million of these were audited in the Transportation and Warehouse Division field office in Memphis. Under the automation program, warehousemen who shipped canceled receipts to the area offices in Temple, Texas, Atlanta, Ga., or Raleigh, N.C., will ship their receipts to Memphis for processing.

The original experiment in connection with the program was conducted on a computer at the University of Tennessee Medical Center in Memphis. Arrangements have been made for regular use of this computer.

Besides being economical, automation of cotton warehouse receipt auditing is expected to result in greatly increased efficiency.

It will keep the "pipelines" full of updated master sheets; examiners will be freed from helping with auditing when the workload gets heavy; the time lapse between the sending of receipts and the completion of the auditing process will be reduced, as will the number of receipts that can accumulate at the warehouse and require auditing before examination can begin.

So, each warehouse can be examined more times per year. A minimum of 1.6 times per year is currently maintained.

The author is Chief, Warehouse Service Branch, Transportation and Warehouse Division, C&MS, USDA

Cross-Use

Saves Money

ANY TIME a government agency saves manpower, taxpayers save money. That's why cross-utilization of Federal meat graders, market news reporters, and meat inspectors is a significant development.

The U.S. Department of Agriculture's Consumer and Marketing Service, by using certain graders market reporters, and meat inspectors interchangeably has been able to make a considerable savings in manpower. C&MS has also been able to reduce costs of vacation relief assistance, scattered heavy work loads, per diem, travel expense and overtime.

Meat graders, market reporters, and meat inspectors are cross trained to perform other duties, permitting more efficient service to the industry.

For example, the Livestock Division program at Detroit required a fulltime market news reporter for many years. Because of a decrease in recent work loads the same job now requires only a half-time employee.

Under the cross-utilization program, one man divides his time between market news reporting and meat grading duties. Meat graders also supply vacation relief for market reporters. Besides the salary savings, the Livestock Division is able to supply increased meat grading service to the industry because more trained graders are available.

Cross-utilization is now in operation in several locations throughout the country and further expansion is planned.

MAN ASKS MACHINE. . .MACHINE TALKS BACK

C&MS' Statistical Staff uses new computer service.

By William H. Curtis

THE STATISTICAL Staff of USDA's Consumer and Marketing Service has a new employee who is pretty fast with figures. His name is GE 235. He can solve complicated problems like multiple regressions and correlations in as few as two or three seconds. Not *everyone* can do that — but then not everyone is a computer.

This genius belongs to an on-site computing service firm in Alexandria, Virginia. The firm, which rents the use of GE 235 to clients like C&MS, operates what amounts to a "computer answering service."

Each user has an in-put and out-put machine, which is a specially adapted teletypewriter, linked to the main computer — GE 235 — by wire. When the user has a computer-size problem to be solved, he types the necessary information on the teletypewriter, which transmits it immediately to the computer. As soon as the computer has solved the problem, it wires the results back to the teletypewriter, which reproduces them in typed form.

An example of the sort of problem C&MS turns over to the computer is the establishment of sampling procedures for products it inspects for quality and condition. A recent such problem was to establish sampling procedures to check the fat content of ground beef. C&MS is currently buying ground beef for use in the National School Lunch Program, and purchase specifications for this product require that it contain no more than 26 percent fat.

Under the system previously used, working out a statistically valid sampling procedure for checking the fat content of lots of ground beef offered to fill purchase contracts would have taken at least 24 hours. Now C&MS statisticians can process such a problem in as short a time as 15 minutes.

C&MS used the traditional "batch control computer system"

until it began using the on-site service this year. Because the batch system requires the collection, batching, and carding of information to be fed into the computer, however, it can be a time-consuming process.

The Alexandria computing service operates what is known as a "multiple access computer system," or simply MACS. An electronic switching device, which receives the inquiries, eliminates the need to channel information through a control clerk and machine operator. As a result, several users can have access to the computer simultaneously. While the computer can handle only one problem at a time, it needs only a few seconds to solve the average inquiry, so there is little waiting.

The improved communications of MACS, which make possible the shorter interval between inquiry and reply, have other advantages. It is easier for the user to trace errors if he set up a problem improperly, because every step in working the problem — his questions and the computer's replies — has been recorded by the teletypewriter. In fact, if he makes a mistake while he is submitting information, the computer instantly wires

the demand, "What?"

C&MS saves money using the on-site computing services. The new service costs \$335 a month for up to 50 hours of computer time, a saving of 40-50 percent over the former method. Including a considerable manpower savings, C&MS expects to spend \$11,480 less for this computer work, in 1967.

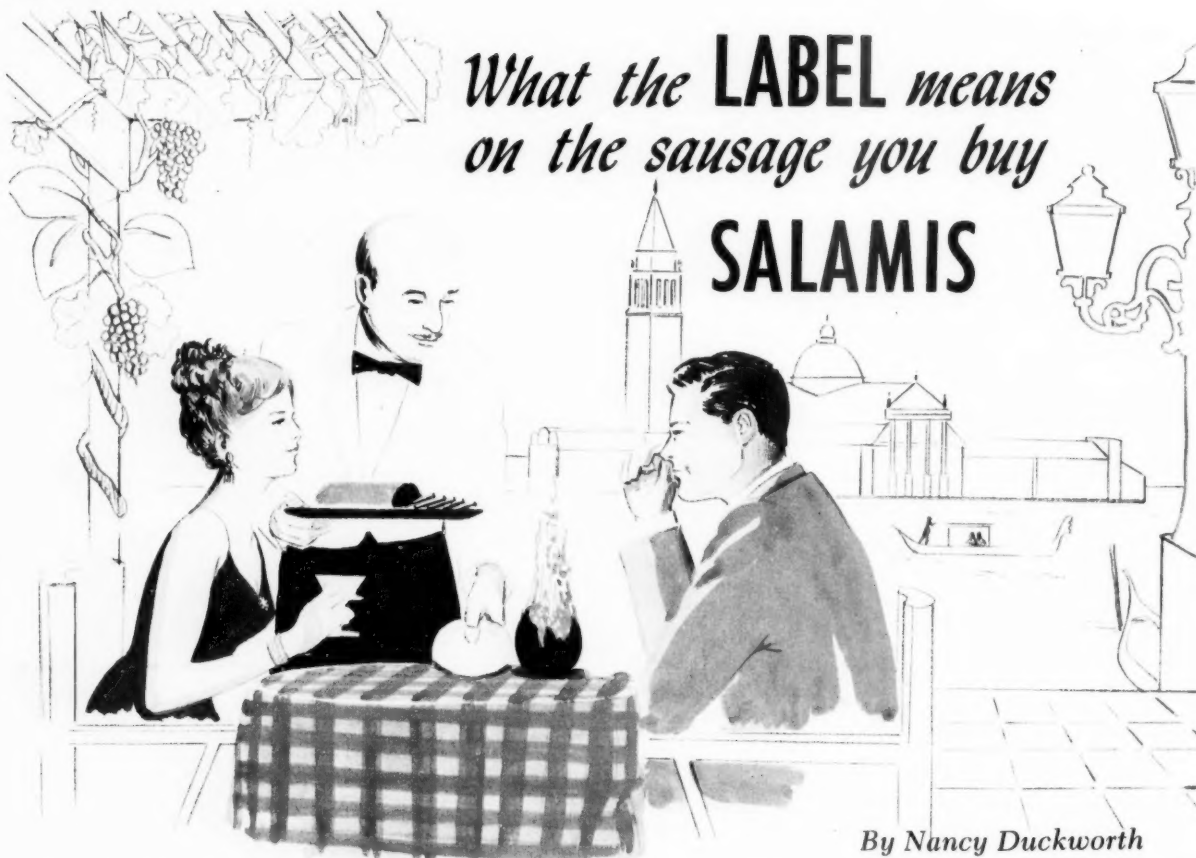
An interesting feature of MACS is the conversation between man and machine. After submitting the necessary information, the user asks the computer to solve the problem by typing "Run." "Wait," is the computer's typed reply. There is a pause, then the answer. Cleared for the next problem, the computer wires "Ready." To sign off, the user types "Good-bye."

Each teletypewriter connected to the computer has a code number used for identification. But C&MS also has a name for its machine — "Becky." It's an affectionate title, and carries no particular meaning. But the statistical staff allows that it *could* stand for Best Economy Caper Known Yet.

The author, a University of Maryland senior, was a 1966 summer trainee in C&MS Information Division.

Merrill R. Swanson, C&MS statistician in his Washington office, examines a print-out coming from a computer in Alexandria, Va. This new system will result in savings of 40 to 50 percent over former methods, plus additional savings in manpower.





By Nancy Duckworth

Salamis and cervelats are two general types of dry sausage. This story will deal with salamis. Part 3B, which will appear in the January issue, will cover cervelats.

DRYING MEAT IN THE FORM of sausage is one of the oldest and tastiest ways man has used to preserve his food.

As far back as the pre-Christian era, writers were promoting dry sausage in that the meat is not for centuries have realized the menu possibilities of this meat product.

Modern cooks too, can take advantage of these fine products, if they know what the label means on the sausage they buy.

All dry sausage is, ready-to-serve, but differs from other ready-to-serve sausage in that the meat is not cooked. Instead, it undergoes a long process of air drying. This drying process, together with the relatively high salt concentration in

dry sausage, enables it to be kept indefinitely under refrigeration.

Dry sausage adds pep and sparkle to a variety of dishes, and is high in nutritive value, too. It contains the same amount of vital proteins, vitamins and minerals as the fresh meat from which it is made.

The author is a home economist, Labels and Standards Staff, Technical Services Division, C&MS, USDA.

Because of its rich flavor and firm texture, dry sausage should be served thinly sliced. Use it to top pizza or as an addition to spaghetti or other dishes and casseroles. And it's a natural for sandwiches and antipasto, too.

Small cubes of dry sausage add zest to scrambled or creamed eggs, macaroni and cheese, scalloped potatoes, potato salad and many creamed vegetables.

Or, use slivers of it in tossed green salads. The possibilities for hors d'oeuvres and tidbits are almost endless.

Many shoppers, however, are bewildered by such foreign names as Arles, Milano, Sopressata, Landjaeger, etc., which prevents them from discovering the wonderful world of flavor contained in these dry sausage products. Join those in the know — start by reading the sausage labels.

First, look for the mark of Federal meat inspection. It is your assurance from the U.S. Department of Agriculture's Consumer and Marketing Service that the sausage you buy is safe to eat, was processed under sanitary conditions, and is truthfully labeled.

This Federal inspection mark must be on all meat products manufactured in plants which sell any portion of their products across State lines.

Many dry sausage products are imported, and thus do not carry a Federal inspection mark. Foreign packing plants which produce sausage for export must be approved by C&MS for sanitary facilities and procedures.

Even the sausage formulas, labels and preparation techniques are subject to review and approval by C&MS officials.

Imported sausage also must pass certain physical and laboratory tests at the time of importation. These are just some of the steps taken by C&MS to protect the American consumer from unsafe and misrepresented food products.

Dry sausage products may be classified into two general types — dry (hard) and semi-dry (soft). The two most popular varieties are salamis and cervelats, both of which may be of either the dry or semi-dry class.

Salamis are probably the most widely used variety of dry sausage in America. Most of them originated in Europe, with the largest number coming from Italy.

The warm climate of Italy stimulated the development of salami. Preserved with an abundance of salt and spices, the sausage was thoroughly air dried and aged, generally without smoking. Treated in this way, salami could be kept for long periods in a cool place.

Many communities gained fame for their own style of salami, using different combinations of meat, spices and casings. But, in general, Italian salamis are made of coarsely chopped, cured lean pork and some finely chopped, cured lean beef. They are frequently moistened with red wine or grape juice, and flavored with garlic and spices.

Italians from the southern part of Italy liked their salami heavily seasoned, especially with red pepper, while those from the northern part preferred a milder sausage.

Controlled curing, drying and aging processes have been developed in this country for manufacturing today's salamis.

The fresh meat is chopped and mixed with the curing ingredients and spices, stuffed into casings, and air-dried at least 100 days. During this period, about 60 percent of the natural moisture is extracted, producing a highly concentrated meat product that keeps well.

The sausage also ages or slightly ferments during this drying period, giving it a distinctively "tangy" flavor. In fact, technically speaking, dry sausage is a "fermented" sausage.

Many of the salamis and other dry sausage products have characteristic wrappings of parchment paper, tinfoil, or tissue. Some are even tied with distinctive patterns of twine.

BC salami simply refers to a salami stuffed into beef casings.

Calabrese salami originated in southern Italy and is usually made entirely of pork seasoned with hot peppers. *Easter nola* is coarsely chopped and mildly seasoned pork containing black peppers and garlic.

A distinctive feature of *Genoa salami* is the cord looped around the length of the sausage and from end to end. It is usually made of pork, although it may contain some beef. The coarsely ground meat is lightly seasoned with garlic. It may be moistened with wine or grape juice, or aged in wine for about 120 days. It is not smoked, and often comes wrapped in parchment paper or cellophane, printed with the Italian colors — red, white and green.

Sopressata, another Italian salami, is lightly flavored with garlic and generally hotly seasoned with paprika and black or red peppers. It is smoked to varying degrees depending on regional tastes. The finished weight is from $\frac{1}{2}$ to $\frac{3}{4}$ pound per link.

Milano salami is similar to other Italian salamis except that the meat is finely cut. It is spiced with garlic and has a distinctive cording.

Alesandri and *Alpino* are both Italian-type salamis of American origin. *Apennino salami* is made of

coarsely chopped pork and beef seasoned with garlic but not smoked.

Arles is a salami of French origin. It is similar to *Milano* although it's made of coarsely chopped meat and corded "criss-cross" style.

German and *Hungarian* salamis are less highly flavored but usually more heavily smoked than Italian salamis. German salami is made of beef and pork seasoned with garlic. It may be tied with loops of twine drawn tightly into the casing about every two inches to give a scalloped appearance.

Cooked salami is another classification of salamis that is often confused with the dry varieties. Cooked salamis are made and seasoned about the same way as dry salamis. The fresh meat is permitted to cure for 48 hours, but then it is cooked and air-dried only a short time or not at all.

They are much softer in texture than dry salamis and usually come in larger slices. Cooked salamis are preferred by many for sandwiches because they are less "chewy." Beer, cotto, and kosher salamis are cooked salamis.

Beer salami is made of pork, beef and spices and sometimes undergoes a short period of air drying.

Cotto is a mildly flavored Italian salami containing whole peppercorns.

Kosher salami is an all-beef product made under complete Rabbinical supervision. Curing, seasoning, and smoking are otherwise similar to other salamis.

No matter how you choose to serve these tasty salamis, they fit right into the busy homemaker's schedule. But to make sure your family is getting the safest sausage — look for the mark of Federal inspection.

Remember, not all sausage is federally inspected — only that which is processed for distribution across State lines. So, look for the symbol of protection provided by the USDA's Consumer and Marketing Service.

TRAINING LIVESTOCK WEIGHMEN

By Matt Jennings

THE WEIGHTS AND MEASURES Section of the Tennessee Department of Agriculture has, for many years, conducted an annual training program for all State, county and city weights and measures officials. This program has been conducted in cooperation with the office of Weights and Measures, National Bureau of Standards. It is designed to acquaint the weights and measures official with his many responsibilities in the enforcement of the Weights and Measures Law.

During the past year, the training program has been expanded to livestock weighing, directing the attention of the scale owner to his responsibility of proper installation and maintenance and the attention of the operator to the techniques required for giving accurate weights. During the year, three training conferences were held in cooperation with the Packers and Stockyards Division of the U.S. Department of Agriculture's Consumer and Marketing Service, one in each grand division of the State. All conferences were well attended by a majority of all those concerned.

These technical training conferences were scheduled to reach the livestock scale owner and licensed weighmen. The program procedure included an explanation of the State Weights and Measures Law, with special emphasis on the provisions contained in National Bureau of Standards Handbook 44 pertaining to specifications, regulations and user requirements for scales. It also included an explanation of the State Weighman Act; the responsibilities and requirements for the scale owner, operator and licensed weighman under each act; and a thorough discussion of the Packers and Stockyards regulations and requirements.

Film Slides were used to illustrate proper installation, maintenance and operation of scales; correct testing procedures and special instructions on weighing.

The purpose of these joint conferences was to cooperatively bring about a much better understanding of the various responsibilities of all agencies and persons, connected

*Tennessee's training
program for its
weights and measures
officials now includes
livestock scale owners
and licensed weighmen.*

*The aim is better service
from all links in
the livestock marketing
chain—and assurance of
accurate weights to the
livestock producer.*

with the marketing of livestock. The hope was that the result would be a better service rendered by all parties involved in the livestock marketing process. Observations indicate that the initial purpose has been accomplished.

Livestock is a most important part of the Tennessee economy. A recent report shows that Tennessee ranks 17th nationally as a beef producing State, and 5th east of the Mississippi river.

Every dollar that changes hands in the commercial livestock indus-

try depends to one degree or another upon a weight derived from a set of scales. Every transaction in the livestock and meat marketing field involves an establishment of weights. Every head of livestock, every cut of meat served by the housewife passes across some form of scale many times during the marketing process.

Livestock men want to be sure that scales on which their livestock is weighed are accurate and that accurate weights are given. For instance, the producer who waits for the market to advance before he sells his product could easily lose the profit he waited for by selling on the basis of an incorrect weight.

The scale may well be considered the cash register of the market or stockyard. The scale ticket is the currency by which the commerce of livestock marketing is conducted. As assurance of accurate scales and weights, the Tennessee Department of Agriculture and the P&S Division of USDA conduct a three point cooperation program of: (1) Requiring all livestock scales to be tested regularly in accordance with the law and regulations; (2) Prescribing weighing procedures and issuing instructions to weighmen; (3) Conducting investigations of weighing practices and correcting unfair practices.

Through such training conferences and services of both the Tennessee Department of Agriculture and the Consumer and Marketing Service's Packers and Stockyards Division, the livestock producer can be assured of accurate scales and weights under our combined cooperative program.

The author is Director, Division of Marketing, Tennessee Department of Agriculture.

C&MS' Dairy Division has labs in various parts of the country, serving dairy plants and exporters by grading their products and helping to upgrade their standards.

USDA Grades Nonfat Dry Milk *By Edwin F. Garbe*

EVERY CHILD KNOWS THERE'S nothing like a tall glass of cold milk to quench a real thirst. And milk—the oldest dairy product—has been the same refresher to children for centuries.

Now modern technology has led to exciting new developments in this longtime favorite. Progress in preserving milk has been especially rapid.

The author is Assistant Chief, Inspection and Grading Branch, Dairy Division, C&MS, USDA.

Nonfat dry milk, constantly improving in quality, has become an increasingly important consumer food product — particularly in its use as a nutritive beverage. Assurance of high quality in dry milk is therefore vital.

The U.S. Department of Agriculture's Consumer and Marketing Service plays a major part through its Dairy Division in improving nonfat dry milk quality.

Their grading service for dry milk for use in this country is a voluntary program, and to the extent it is used by dairy plants gives the consumer the assurance he needs that the product is of high quality.

Dairy Division's Inspection and Grading Branch has laboratories in various parts of the country, serving dairy plants and exporters by grading their products and helping to upgrade their standards.

The Chicago laboratory recently reported enthusiastically on a nine-month study of flavor and vitamin A stability in fortified nonfat dry milk. The milk was purchased by the government for export.

The Chicago tests show that after nine months the fortified nonfat dry milk kept its flavor just as well as nonfortified samples stored under identical conditions and the potency of the vitamins, even of the less stable vitamin A, remained good.

Another similar study, made in cooperation with other USDA agencies, examined fortified nonfat dry milk intended for overseas assistance programs which was packed in the original commercial containers.

This milk was stored for five months at 90°F and 85 percent relative humidity — conditions like those that often exist between the production of nonfat dry milk and its consumption by needy people in tropical and subtropical countries. At the end of the test, all samples had retained flavor satisfactory for U.S. Extra Grade, the highest grade for nonfat dry milk, and vitamin A retention was 72 percent or better.

These studies provide the first information, other than some limited research work, that the dairy industry, the government, or vitamin manufacturers, have had concerning the stability of fortified nonfat dry milk.

The results show important progress in identifying, obtaining, and incorporating vitamins in food products. New knowledge about sources of vitamins, kind of vegetable fat used as a carrier, and method of mixing the vitamins with

the milk, made the work possible.

The tests show that fortified milk can be stored for a considerable length of time under relatively high temperature and humidity, with no significant decrease in vitamin and flavor stability.

Dairy Division personnel made the greatest breakthrough in improving nonfat dry milk several years ago when they developed the technique of running "microscopic clump counts" as a routine test on product quality. This test to measure bacterial content, which in turn is directly indicative of milk quality, has brought about a marked improvement in nonfat dry milk. Especially notable is the overall flavor improvement.

Formerly nonfat dry milk had been used primarily in bakery, candy, and meat products. Increasing amounts are now used by dairy plants and consumers.

Most nonfat dry milk from U.S. production for export — millions of pounds go to children over the entire world every year — must be graded.

Dairy Division labs perform this service in addition to their testing and services to dairy plants.

USDA grades fortified nonfat dry milk intended for overseas assistance programs.



CONSUMER AND MARKETING BRIEFS

Selected short items on C&MS activities in consumer protection, marketing services, market regulation, and consumer food programs.

COTTON MARKET NEWS TAKES TO THE AIR

Cotton market news has literally taken to the air. It now blankets many cotton-producing counties in the cotton belt via radio and television.

Market news — made available through the combined efforts of USDA's Consumer and Marketing Service and news media — is current information on qualities of cotton available, prices paid, and supply and demand. It helps to tell farmers when and where to market for the most money.

Officials estimate that 510 radio stations and 72 television stations are carrying cotton market news this season, with the number showing a steady increase over past years.

Local and central markets provide daily information. C&MS market reporters generally gather and transmit this information the same day. In many cases, the market reporters broadcast live or taped shows in heavy production areas to aid farmers during the harvest season. They also provide information for weekly market summaries and price quotations, which are aired to farmers. In addition, both daily and weekly releases are furnished to news media through the major wire services and to local and central market newspapers and trade magazines.

ABUNDANT FOODS FOR HOLIDAY FESTIVITIES

Hanging high the mistletoe and holly, housewives can merrily think about the abundant supply of tasty foods from which they may choose this festive season.

The Consumer and Marketing Service's list for holiday shoppers

includes an abundance of tender young broiler-fryers, pork, winter pears, raisins, grapes and canned salmon.

Although broiler-fryers head the current list, turkeys are in excellent supply, too, since this year's crop has broken all previous records. This offers menu-planners an excellent choice.

Pork is also in good supply, and many markets will be offering specials as more abundant supplies appear at consumers' favorite markets. Beef supplies will continue to be relatively plentiful, and prices fairly steady, so housewives may soon find this a welcome addition to their wintertime menus.

Always-popular California Emperor grapes are in very generous supply and quality is excellent. Almeria and Ribier varieties also appear at numerous fruit bins. Raisins, too, are in plentiful supply, and will remain so for some months ahead.

Another favorite item is pears. The large supply of Bartlett's is overlapping with the winter varieties, such as Boscs, d'Anjous, and the Comice.

There are big inventories of protein-rich canned salmon on hand from the year's catch.

And here's further good news for consumers: Barring adverse weather, there's a record large orange crop coming up. There are also plentiful supplies of grapefruit, and frozen orange concentrate.

Popular nuts come in for their share of attention, too — pecans, walnuts, filberts and almonds. And of course peanuts are always an additional holiday favorite.

FOOD STAMP NEWS

The Food Stamp Program continues to receive excellent support

from Head Start Programs. In Cincinnati, Ohio, recently, sheets containing food stamp information were given Head Start youngsters to color — because they would certainly show their families their creations and the messages about the Food Stamp Program would thus reach their intended targets. The same device increased participation in Pulaski County, Ark., (see *Agricultural Marketing*, March 1966).

DIAL "M" FOR PLENTIFUL FOODS MENUS

To food shoppers in the Buffalo, N.Y. area, the telephone has become a fast, convenient way of obtaining menu ideas and information on good food buys. The latter is supplied by the U.S. Department of Agriculture's Consumer and Marketing Service through its Plentiful Foods Program.

For the past seven years, the Home Service Division of a public utility has made it possible for Buffalo residents to obtain menu ideas by simply calling the "Dial-A-Menu" number — 854-7116.

The recorded one-minute message is heard by approximately 150 callers each week, even though the service has not been prominently advertised.

The messages are recorded each Monday by home economists employed by the utility. Their telephone voices have become so well known that many homemakers attending demonstrations by home economists are able to identify them as "Dial-A-Menu" voices.

Mrs. Martha Nichol, who heads the utility's Home Service division, said the purpose of the program is "to help the homemaker not only by giving her a better planned

menu, but also to help her budget by suggesting foods in season and at most reasonable prices. This is why we rely heavily on USDA's Plentiful Foods list. We know it includes foods that are abundant and therefore generally economically priced."

COTTON MARKET NEWS "en ESPANOL"

Cotton Market News, vital information for all cotton producers no matter what language they speak, is now being broadcast in Spanish by three Texas radio stations in the Rio Grande Valley.

International Radio Station KIRT at Mission, Tex., recently began broadcasting only in Spanish. The station had broadcast market news in English for four years and wanted to continue using the information — but it was needed in Spanish.

So to assist cotton farmers of the Rio Grande Valley who listen to the station, a Spanish-speaking employee in the Harlingen cotton classing office is now taping in Spanish the same information which the office provides in English to other news outlets. The Harlingen cotton classing office, like other cotton belt offices of the Cotton Division of USDA's Consumer and Marketing Service, collects and disseminates information on qualities of cotton sold, prices paid, and other pertinent market data.

Recently, stations KRGV at Weslaco and KGBT at Harlingen, which broadcast in both English and Spanish, also began using the tapes prepared in Spanish because a large percentage of the population in the Rio Grande area is of Latin American descent.

This is the only area in which cotton market news is now being broadcast in a foreign language. Several years ago, however, the same type program was taped in French for use in southern Louisiana.

NEW C&MS PUBLICATIONS AND FILMS

The following publications have come off press since September 1966: PA 299, *USDA Poultry Inspection — A Consumer's Safeguard* (slightly revised); PA-399, *The Packers and Stockyards Act* (slightly revised); PA-590, *Recordkeeping for Livestock Dealers Under the Packers & Stockyards Act* (slightly revised); PA-591, *Your Livestock Claims* (slightly revised); PA-728, *Shopper's Guide for Canned Peas*; PA-764, *Lunch at School Serves the Nation — 20 Years of Progress in the National School Lunch Program*; MB-1, *How to Buy Poultry by USDA Grades* (revised); L-442 *How to Buy Eggs by USDA Grades and Weight Classes* (revised). Single copies are available free by postcard request from Office of Information, U.S. Department of Agriculture, Washington, D.C. 20250. (Please order by number and title.)

Available free from Information Division, Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250 are C&MS-8, *USDA's Beef Carcass Evaluation Service*; C&MS-22, *Bulk Cooling Tanks-1966*; C&MS-49, *The Federal Seed Act*.

Please include your ZIP Code with your publications requests.

* * *

Single copies of the following 16mm, sound, black and white TV films are available free from USDA Radio-TV Service, Office of Information, Washington, D.C. 20250. (Please include your ZIP Code with your request.) *Grading Party* (1 minute), *School Lunch Bargain* (3 minutes), *Packers and Stockyards Act* (3 minutes), *Get on Your Feet* (30 seconds — designed to increase Food Stamp participation).

Also *A Share for All* (slide set explaining Food Stamp Program operation — Spanish Language Version).

MEAT TIPS

—from meat inspectors
of USDA's Consumer
and Marketing Service

To protect consumers, USDA meat inspectors supervise all slaughter and processing phases in meat plants shipping products in interstate or foreign commerce. An example of thoroughness: a meat inspector discovered recently that casings to be used on meat products had been pre-packaged in a solution containing nitrites and ascorbates. Packaging casings in such solutions is forbidden in federally inspected plants because these chemicals might add a cured appearance and deceptive coloring to fresh meat products such as fresh meat sausage.

* * *

Federal meat inspectors must approve all materials used in the construction of federally inspected meat plants, to insure that such materials will not contaminate the meat. This even includes the type of paint used on the interior walls. Pigments consisting of salts of metals known to form toxic compounds such as lead, chromium and cadmium are not permitted, as they are potentially harmful and could contaminate products prepared in the painted area.

* * *

Information on the label of all meat products in interstate commerce must be approved by the U.S. Department of Agriculture. It was recently discovered that a package which had a net weight listing of 8 ounces on the label was being filled with only 7½ ounces of product. This was corrected by USDA in order to protect the consumer from deceptive packaging.

BRAZILIANS OBSERVE U.S. MARKETS NEWS SYSTEM



American and Brazilian agriculture officials discuss mutual problems at inauguration of a new Market News Service for Brazil at Rio de Janeiro, April 1966. Seated from left, U.S. Secretary of Agriculture, Orville L. Freeman; Brazilian Minister of Agriculture Ney Braga; Jack Wyant, Press Officer USIS; standing, Jose Victor Pellegrini, General Director Department of Economics, Ministry of Agriculture; Dr. Richard Newberg, Director Agriculture and Rural Development Office, AID; and Lance Hooks, USDA Market News Specialist.

AROUND THE WORLD, the United States system of marketing farm products is acknowledged to be one of the best and most efficient. It provides a model for many other countries which seek to feed and clothe their citizens as well as we do ours.

One of the bases of our system — and of any free competitive marketing system — is accurate, comprehensive, and timely price information. Such market news not only helps guide production as to qualities and quantities needed, but is essential to guide the flow of products through marketing channels from producer to consumer — so that products are available when and where they're needed.

Countries which seek to build the kind of efficient, rapid, and dependable marketing system we have, therefore, need to develop a similar source of market information. That is exactly what Brazil is doing.

Last spring seven Brazilian agriculturists visited this country to observe operations of the Federal-State Market News Service, administered by the U.S. Department of Agriculture's Consumer and Mar-

keting Service. They were the first of 28 Brazilians who will be trained in the U.S. to form the nucleus for a national market news system in Brazil.

When the Brazilian team arrived in Washington, they were given a general orientation in U.S. agriculture, rural society and institutions. They were also briefed by C&MS market news chiefs in Washington and were shown how the C&MS market news teletype system works.

The team began its studies of market news at a tobacco auction in Upper Marlboro, Maryland, where they followed market reporters through daily routines and saw how market news was collected and distributed.

In visits to Philadelphia, Chicago, New York City and Benton Harbor, Michigan the group observed operations of terminal markets, farmers produce markets, and processing and storage plants — and learned how market news reporters gather information at each type of market.

In Illinois, Indiana and Michigan they saw news reporting on marketing of cattle, hogs and grain. They visited various types of

farms, feed lots, country elevators, livestock auction markets and corn and soybean processing plants. In Illinois they were entertained by rural families with a close-up observation of farm life in the U.S.

The Brazilians also visited the New York Mercantile Exchange and the Chicago Board of Trade where they observed the trading and heard it explained.

Of particular significance to the team was a visit to the general offices and warehouses of one of the world's largest chains of food stores. An executive of the company explained in detail the complete operation, from contracting with growers, grading and packaging, on through to store price mark-ups, with particular emphasis on the relationship of market news to these operations.

Research was explained at Purdue University in Indiana. The group was told how Land Grant colleges, through research, extension, and teaching have tremendously influenced the development of the agricultural economy of the United States.

Technical leader of the group was Lance Hooks, C&MS market news specialist, who, as a member of the USDA team in Brazil, has spent much of the last two years helping Brazil develop a market news system. The USDA team is sponsored by the Agency for International Development.

The project, underwritten by the government of Brazil, so far connects three of the largest fresh food markets in Brazil — Belo Horizonte, Rio de Janeiro and Sao Paulo — with teletypewriters transmitting daily market reports on fruits, vegetables, cereals, poultry and eggs. This system was officially inaugurated April 20, by U.S. Secretary of Agriculture, Orville L. Freeman and Brazil's Minister of Agriculture, Ney Braga.

Plans are to extend the service to eleven additional market centers in Brazil by 1970. In this effort, the Brazilian market news team will make good use of their study of the U.S. market news system as their pattern for developing an efficient system of their own.



Spectrophotometer shows the amount of calcium in flour.



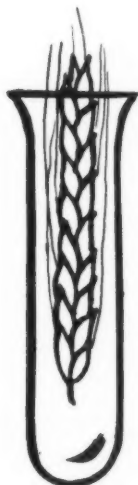
Technician records the ph (acidity) of a flour sample

SOPHISTICATION and SIMPLICITY

TO THE AVERAGE person, being asked how well a certain shipment of flour will perform is like being asked how high the sky is. But to the laboratory technicians at the Consumer and Marketing Service's Grain Division testing laboratory at Beltsville, Md., the answers to these and similar questions come easily.

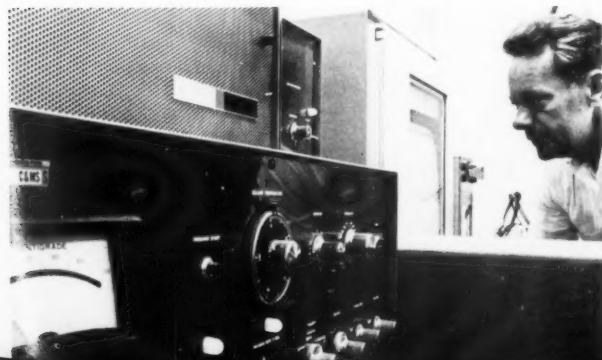
The laboratory personnel use simple chemical and physical tests as well as some of the most sophisticated electronic equipment to determine such things as protein content, purity, calcium enrichment, and acidity.

The lab tests samples of flour, cereal, grain, oil and shortening purchased by the Department of Agriculture. It is up to the Testing Section to make sure specifications are met. Products tested in the lab will reach needy persons at home and abroad and millions of school children in the United States in school lunch programs.



The calcium precipitation test assures that all flour for export is fortified with calcium, as the specifications require.

A gas chromatograph separates mixture in minutes. Graph at right records the components and amounts of each.



Shortening for domestic use awaits testing.



Kjeldahl test to determine amount of protein in flour samples.



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OFFICIAL BUSINESS

Why The Cost of Poultry and Egg Grading Is Dropping *By Bernard W. Kempers*

THE COST OF "services," we are repeatedly told, is rising rapidly in our booming economy, but there is one service for which costs have gone down. That is the grading service for poultry and eggs provided to industry by the U.S. Department of Agriculture's Consumer and Marketing Service on a voluntary, fee-for-service basis.

Over the past six years, the per-unit cost to industry has dropped by more than 25 percent—from \$1.01 per thousand units graded to 75 cents per thousand units. (One unit is the equivalent of one pound of poultry, shell eggs, egg products, or rabbits.) This cost reduction occurred while the salaries and fringe

benefits of Federal graders and supervisors increased by more than 35 percent.

This achievement can be attributed to several factors:

- * Grading is now performed on a larger scale, in more highly mechanized plants which enables graders to examine more units per hour than in the past.
- * Most plants now operate on a year-round basis, eliminating inefficient use of graders during slack periods.
- * The demand for grade-labeled poultry and eggs has increased sharply in recent years. As a result the amount of poultry and eggs graded during the past six years jumped by 54.5 percent—from 5.5 billion units in fiscal 1961 to 8.5 billion units during fiscal year 1966. This increase brings about some "economies of scale."
- * Just about all grading of poultry products is now done at the processing plant. At one time, large volume buyers bought poultry products from local brokers, requiring graders to be on hand at terminal markets. Today, many large chain stores buy poultry and eggs directly from processing

plants on the basis of U.S. grades. This change has resulted in the consolidation of grading operations—and economy has been achieved through a reduction in the number of supervisors and State grading offices needed.

Consumers share with industry in the benefits from increased effi-

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ciency in USDA's poultry and egg grading program.

At present, Federal-State grading service is being provided to 361 poultry plants, 367 shell egg plants, and 100 egg products plants.

Last fiscal year, more than 1.3 billion dozens of shell eggs, about 6 billion pounds of poultry and turkeys, and nearly one million pounds of rabbits were graded. This includes more than 67 million pounds of chickens and turkeys regraded last year by USDA for school lunch programs.

Had the grading efficiency in fiscal 1966 remained as it was in fiscal 1961, the volume graded last fiscal year would have required about 419 additional man-years at an increased cost to industry of about \$2,267,628.

Under USDA's Fresh Fancy Quality egg program, graders test samples of eggs from quality-controlled stocks of participating producers, thus eliminating need of costly interior quality check of every egg.



